

of the leaves of *B. malabarica* too, which have not been reported earlier. They were present in most but not all the specimens studied in CAL. Further, the pits are not so closely situated as in *B. foveolata* leaves except sometimes near the leaf margins. The inflated trichomes in the fresh leaves are at first hyaline, later yellowish to rusty. Finally they shrink and wither away after maturity of the leaves.

Many pits with inflated trichomes were also present on the under surface of the seed leaf of *B. malabarica*, observed on seedlings that grew under the trees of *B. malabarica* cultivated in Division 21 of the Indian Botanic Garden, Howrah. Das (1996) also studied the seedlings of the same tree by germinating some seeds received from me (Das, pers. comm.). However,

he did not mention pits with inflated trichomes on the under surface of the leaves.

The voucher specimen (15.v.2000, *Bandyopadhyay* 105) of the seedlings of *B. malabarica* has been deposited in CAL.

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January 24, 2001 S. BANDYOPADHYAY
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38. SEEDLING MORPHOLOGY OF *BAUHINIA FOVEOLATA* DALZ.,
 LEGUMINOSAE: CAESALPINIOIDEAE

(With one text-figure)

Bauhinia L. subgen. *Piliostigma* (Hochst.) Kurz sect. *Piliostigma* is represented in India by two species, namely *Bauhinia foveolata* Dalz. and *B. malabarica* Roxb. Studies on the seedling morphology of the latter species were carried out by Troup (1921), Das (1996), and Das and Paria (1999). The latter, however, overlooked the publication of Troup (1921) where the seedling morphology of three more species, namely *B. racemosa* Lam., *B. purpurea* L. and *B. variegata* L. were described in detail. I describe here the seedling morphology of *B. foveolata*, which is endemic to India and found in semi-evergreen forests from 450-1,000 m in Gujarat, Dadra & Nagar Haveli, Maharashtra and Karnataka.

Eleven seed samples were scarified with a razor and sown in the soil at a depth of about 5 mm in September 1999. Six of the seeds

germinated and the seedlings started protruding above the soil surface after three days. The average maximum and minimum temperature during that period were 32.5 °C and 26.5 °C respectively. The seedlings took another 65-73 days to reach the 4th leaf stage. One of the seedlings in the early 4th leaf stage has been deposited as a voucher specimen (13.xi.1999, *Bandyopadhyay s.n.*) in CAL.

Measurements of different parts of the seedlings, given here up to the 4th leaf stage, are those for the fully mature parts.

Duke and Polhill (1981) have been followed for terms like phaneroepigeal and foliar cotyledon.

Seedlings phaneroepigeal, 14-16.5 cm high at 4th leaf stage. Primary root 9-10 cm long, whitish-brown, terete, tapering; secondaries moderate in number, very fine, fibrous. Hypocotyl 1.2-1.7 cm long, whitish-green, arched at first,

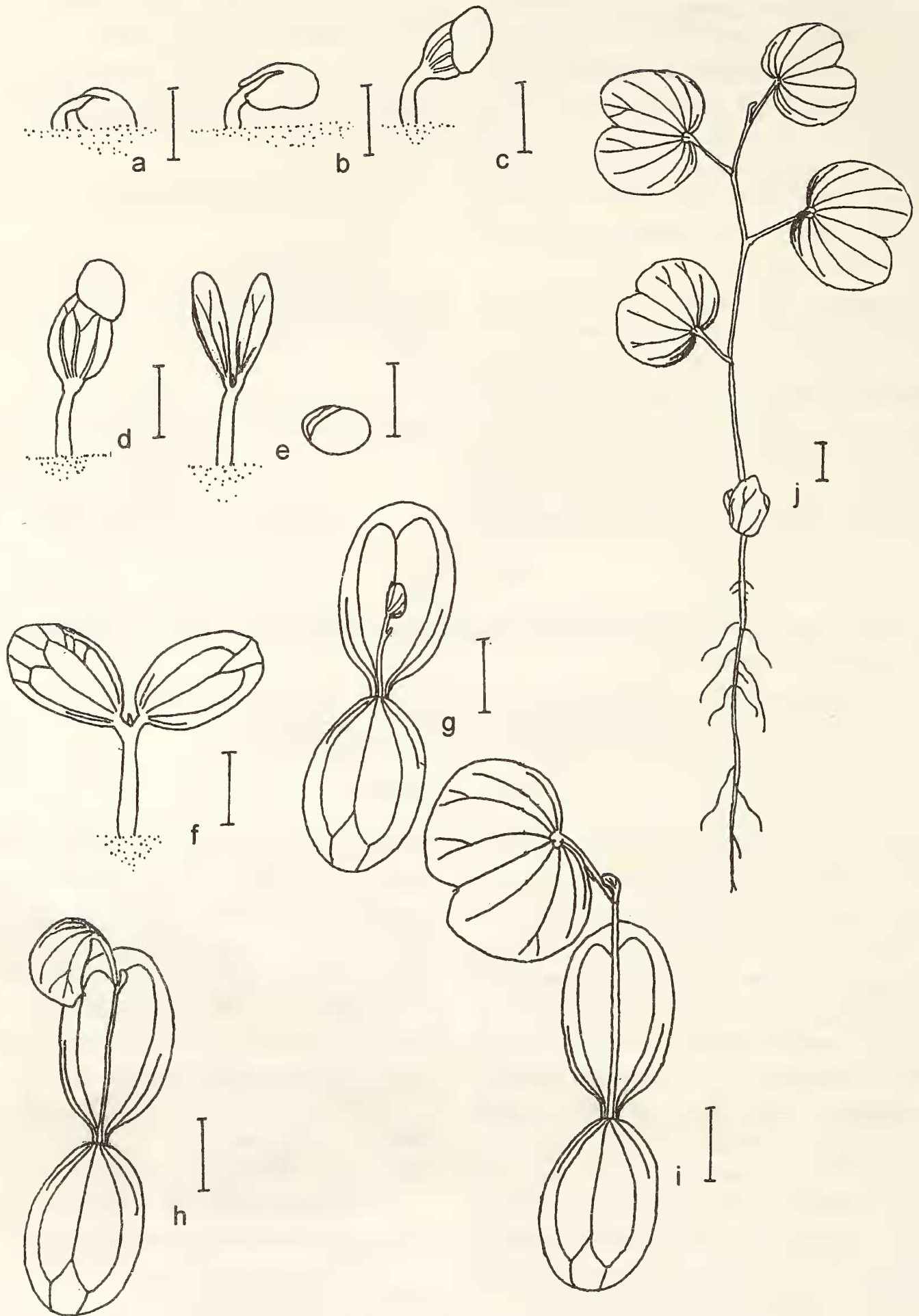


Fig. 1: *Bauhinia foveolata* Dalz.; a-j. Different stages of seedling up to the 4th leaf stage (Scale = 1 cm)

finally slightly curved or straight, stout, initially increases in diameter towards root, terete, becoming tetragonal and grooved near the foliar cotyledons, glabrous. Cotyledons 2 (exhibit up and down nyctinastic movement but do not fold like leaves – also see Pijl 1952: 295, 302), opposite, foliar, 2.3-2.9 x 1.6-2.0 cm, yellowish-green at first, finally green, wither through yellow to brown at 4th leaf stage, slightly fleshy, elliptic, sometimes slightly asymmetric, entire, obtuse at apex, more or less so at base, glabrous, 5-nerved (the young foliar cotyledons appear to be 3 or 4-nerved), middle one bifurcates near apex; petioles *c.* 2 mm long, green, flattened above, semi-lunar in T.S., with prominent pulvinus at distal end; interpetiolar region with hair-like outgrowths. Stem green, erect, slender, slightly angled, somewhat zigzag at nodes, at first pubescent, finally glabrescent. Leaves alternate, 2.0-3.2 x 3.0-4.0 cm, 1st leaf not much smaller than others, green, suborbicular to broadly ovate, 9 (1st leaf) -11 (2nd to 4th leaves)-nerved (nerves clearly visible to the naked eye except those near extreme leaf-base), bifid *c.* 1/5 their length into subacute to broadly obtuse lobes at apex, mucronate between lobes, shallowly cordate at base, upper surface glabrous, lower surface pubescent mainly along nerves and with fine pits within areolae of reticulations; pits not so

closely situated as in mature leaves, each pit with a hyaline inflated trichome (see Tucker *et al.* 1984), which finally turns yellowish to rusty; petioles 1.3-2.4 cm long, green, herbaceous, dorsally grooved, with deep green pulvinus at both ends, pubescent, finally glabrescent. Stipules 2, minute, green, free, lateral, narrowly ovate, falcate, pubescent, deciduous.

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39. *SYZYGIUM NEESIANUM* ARN. (MYRTACEAE) — AN ADDITION TO THE INDIAN FLORA

(With one text-figure)

During a visit to Kodayar hills, Kanyakumari district, Tamil Nadu, an interesting

specimen of a tree species of *Syzygium* Gaertner (Family Myrtaceae) was collected. The characters